

Application Number 10/731,867

Amendment dated June 27, 2006

Responsive to Office Action mailed February 27, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): An implantable medical device comprising:
a plurality of interconnected modules, each of the modules comprising a respective one of
a plurality of housings; and
an overmold that at least partially encapsulates each of the housings,
wherein the housings are horizontally distributed at respective locations of the overmold,
and separately encapsulated by the overmold, and

wherein the overmold is formed such that a surface of the overmold that is proximate to a
cranium of a patient when the implantable medical device is implanted on the cranium is concave
along at least one axis prior to manipulation of the implantable medical device.

Claim 2 (Original): The implantable medical device of claim 1, wherein the surface of the
overmold is concave along two axes.

Claim 3 (Original): The implantable medical device of claim 1, wherein the overmold is
flexible.

Claim 4 (Original): The implantable medical device of claim 1, wherein the overmold
comprises silicone.

Claim 5 (Original): The implantable medical device of claim 1, wherein the overmold
comprises at least two materials.

Claim 6 (Original): The implantable medical device claim 1, wherein the surface of the
overmold is concave such that the surface conforms substantially to the cranium.

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Claim 7 (Previously Presented): The implantable medical device of claim 1, wherein the surface of the overmold is concave such that the overmold conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 8 (Original): The implantable medical device of claim 7, wherein the radius of the arc is approximately equal to 7 centimeters.

Claim 9 (Previously Presented): The implantable medical device of claim 7, wherein the surface comprises a first surface of the overmold, and a second surface of the overmold that is distal from the cranium when the implantable medical device is implanted on the cranium substantially conforms to the arc prior to manipulation of the implantable medical device.

Claim 10 (Original): The implantable medical device of claim 1, wherein the modules are positioned within the overmold in one of a triangular configuration and a linear configuration.

Claim 11 (Original): The implantable medical device of claim 1, wherein the overmold completely encapsulates each of the modules.

Claim 12 (Original): The implantable medical device of claim 1, wherein the overmold does not encapsulate a portion of each of the modules that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium.

Claim 13 (Previously Presented): The implantable medical device of claim 1, wherein the housing of each of the modules comprises a surface that is proximate to a cranium when the implantable medical device is implanted on the cranium, and the surface of the housing of at least one of the modules is concave along at least one axis.

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Claim 14 (Previously Presented): The implantable medical device of claim 13, wherein the at least one of the modules comprises a control module that includes control electronics, and the surface of the housing of the control module is concave along two axes.

Claim 15 (Previously Presented): The implantable medical device of claim 13, wherein the at least one of the modules comprises a power source module that include a battery with a wound coil construction, and the surface of the housing of the power source module and the wound coil battery are concave along one axis.

Claim 16 (Previously Presented): The implantable medical device of claim 13, wherein the at least one of the modules comprises a power source module that includes a battery with a foil pack construction, and the surface of the housing of the power source module and the foil pack battery are concave along one axis.

Claim 17 (Previously Presented): The implantable medical device of claim 13, wherein the at least one of the modules comprises a recharge module that includes a recharge coil for inductively receiving energy, and the surface of the housing of the recharge module and the coil are concave along two axes.

Claim 18 (Original): The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface conforms substantially to the cranium.

Claim 19 (Original): The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 20 (Original): The implantable medical device of claim 19, wherein the radius of the arc is approximately equal to 7 centimeters.

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Claim 21 (Original): The implantable medical device of claim 19, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is distal from the cranium when the implantable medical device is implanted on the cranium conforms to the arc.

Claim 22 (Original): The implantable medical device of claim 1, further comprising:
a therapy delivery circuit to deliver stimulation to a brain of the patient; and
control electronics to control the delivery of stimulation by the therapy delivery circuit,
wherein the therapy delivery circuit and control electronics are located within one of the modules.

Claim 23 (Currently Amended): An implantable medical device comprising a metallic housing that includes a surface that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium, wherein the surface is concave along at least ~~one~~ two axes such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 24 (Original): The implantable medical device of claim 23, wherein the radius of the arc is approximately equal to 7 centimeters.

Claim 25 (Canceled).

Claim 26 (Original): The implantable medical device of claim 23, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is distal from the cranium when the implantable medical device is implanted on the cranium conforms to the arc.

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Claim 27 (Original): The implantable medical device of claim 23, further comprising:
a therapy delivery circuit to deliver stimulation to a brain of the patient; and
control electronics to control the delivery of stimulation by the therapy delivery circuit,
wherein the therapy delivery circuit and control electronics are located within the housing;

Claim 28 (Previously Presented): The implantable medical device of claim 1, wherein at least two of the housings are metallic.

Claim 29 (Previously Presented): The implantable medical device of claim 28, wherein the at least two of the housings are hermetic and formed of titanium or stainless steel.

Claim 30 (New): An implantable medical device comprising:
a plurality of interconnected modules, each of the modules comprising a respective one of a plurality of metallic housings; and
a flexible overmold that at least partially encapsulates each of the housings,
wherein the overmold is formed such that a surface of the overmold that is proximate to a cranium of a patient when the implantable medical device is implanted on the cranium is concave along at least one axis prior to manipulation of the implantable medical device, and
wherein the surface of the overmold is concave such that the overmold conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 31 (New): The implantable medical device of claim 30, wherein the housings are horizontally distributed at respective locations of the overmold, and separately encapsulated by the overmold.